

Behavioral Risk Factor Surveillance System



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Contents

Diabetes Prevalence and Care in New York State

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The Centers for Disease Control and Prevention (CDC) provide funding and technical assistance to the Behavioral Risk Factor Surveillance System (BRFSS) which was introduced in New York State in 1983 and has been conducted annually since 1985. Standardized questions developed by CDC are administered via a telephone survey. This survey provides state-specific prevalence estimates of disease and preventable behaviors attributable to early morbidity and mortality. These data are used to assess health-related behaviors, plan and promote health programs and support legislative decisions.

This report describes the prevalence of diabetes and the level of diabetes health care in New York State. The data were collected through the 1993-95 BRFSS and the diabetes module questions included in the 1994 and 1995 BRFSS.

The Behavioral Risk Factor Surveillance System – Summary Report is published quarterly. Issues will contain brief summaries on one or more of the risk factors included in each year's survey. Occasionally, issues will summarize special surveys, analysis of trends and more in-depth discussion of specific risk topics. Copies may be obtained by contacting:

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Diabetes Prevalence and Care in New York State

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Overview

Diabetes is a heterogeneous group of metabolic disorders characterized by high blood glucose levels. The two most common types of diabetes are type 1 (formerly known as insulin dependent diabetes mellitus: about 5-10 % of all diabetes), and type 2 (formerly known as noninsulin dependent diabetes mellitus: about 90-95 % of all diabetes).^{1,2} Type 1 diabetes develops most often in children and young adults, although it can appear at any age. Type 2 diabetes usually develops in adults over the age of 40 and those who are obese.³

Diabetes is recognized as one of the leading causes of death and disability in the United States. Diabetes is the most frequent cause of blindness among adults, and the major cause of nontraumatic lower-extremity amputation and end-stage renal disease.⁴ Uncontrolled diabetes is associated with acute complications such as diabetic ketoacidosis. Diabetes is also an important risk factor for many chronic conditions, including cerebrovascular disease, ischemic heart disease and peripheral vascular disease.

There is no cure for diabetes, but careful management of the disease can avert the development of complications or slow the progression of them. People with diabetes need to control their blood glucose levels as close to the normal range. Even small improvements in glucose control are beneficial.⁵ Achieving and maintaining near normal or normal glucose level requires complex changes in the lifestyle and self-care of the person with diabetes. Comprehensive and individualized diabetes health care is also necessary. Treatment emphasizes blood glucose monitoring, regular physical activity, meal planning and attention to relevant medical and psychosocial factors. In many patients, oral medications and or insulin injections are also required. Early detection and treatment of diabetic complications, including routine eye and foot examinations, are also important components of diabetes health care. Careful management of diabetes is cost-effective, because it can reduce the likelihood of costly treatment for complications and emergency room use.⁶

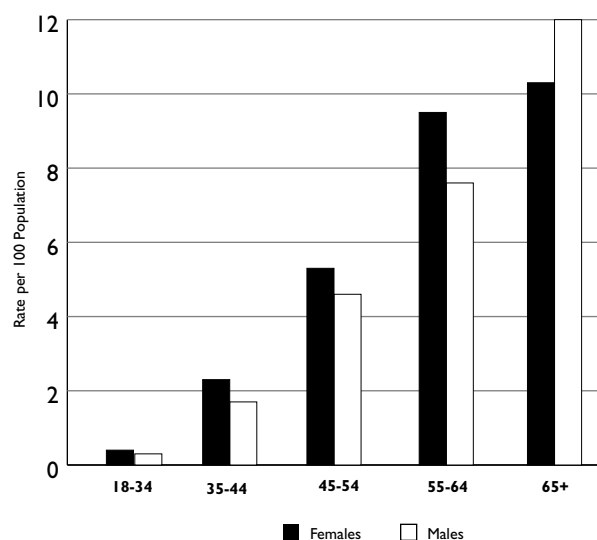
About Data

From 1993 through 1995, people with diabetes were identified by the question, "Have you ever been told by a doctor that you have diabetes?" Probes were used to determine if the person had diabetes only during pregnancy (gestational diabetes). Cases with gestational diabetes are considered nondiabetic for this report. In 1994 and 1995, an additional 12 questions were asked of those with diabetes. In order to obtain an adequate sample size, multiple years of data were pooled. Sample weights were applied to adjust for the age-sex-race distribution of New York State population estimates in 1994.

Diabetes Prevalence

According to the pooled 1993-1995 BRFSS data, there are approximately 580,000 people with diagnosed diabetes in New York State (4.2% of the population). It is estimated that the same number of people have diabetes, but have not yet been diagnosed.¹

Figure 1. Diabetes Prevalence Rates for NYS Adults By Age and Gender, 1993-95



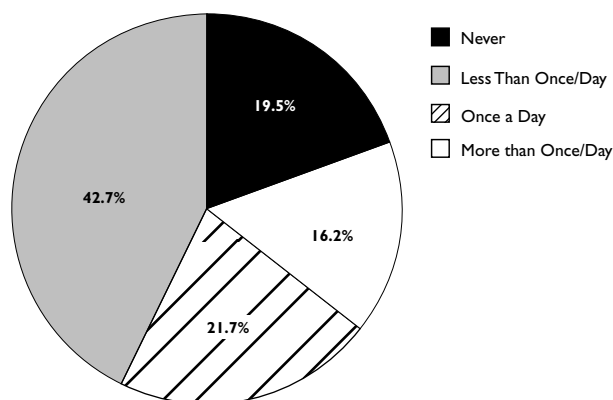
As seen in *Figure 1*, diabetes prevalence increases with age. Diabetes prevalence also varies with race/ethnicity. Non-Hispanic black women have the highest reported prevalence of diabetes (7.3%). This compares to a prevalence of 4.3% for non-Hispanic white women. Socioeconomic factors such as education and income vary between people with diabetes and those without. Approximately twice as many adults with diabetes had less than high school education compared to nondiabetic adults (34% vs 17%). Prevalence rates are higher for people with lower family income. Obesity is a major risk factor for developing diabetes. Fifty-five percent of people with diabetes are obese compared to 25 percent of people without diabetes.

Diabetes Care

According to the pooled 1995 and 1996 BRFSS data, 10 percent of people with diabetes were diagnosed at less than 30 years of age, indicating type 1 diabetes as a likely diagnosis.⁷ Nine percent were diagnosed between the ages of 30 and 40. A majority (82%) were diagnosed at age 40 or older. Thirty-two percent of people with diabetes currently use insulin.

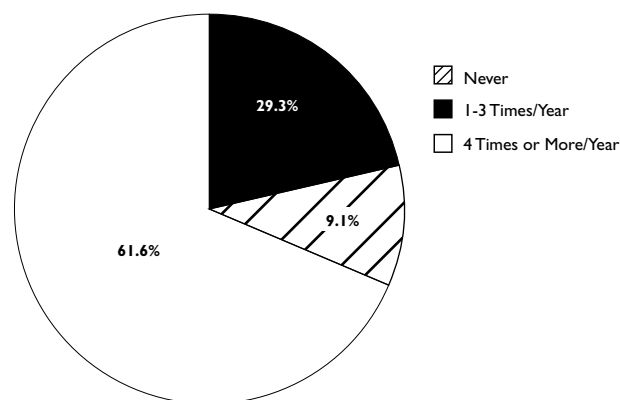
It is recommended that blood glucose levels be checked at least once a day.⁸ An alarming majority of people with diabetes do not check their glucose levels at the recommended frequency. As seen in *Figure 2*, only 22 percent check their glucose once a day, and 16 percent more than once a day. Approximately 60 percent of people with diabetes do not check their glucose levels frequently enough.

Figure 2. Blood Glucose Self-Monitoring



Current recommendations suggest that people with diabetes see their health care provider at least four times per year.⁸ The BRFSS data in *Figure 3* indicate that 62 percent of people with diabetes see their health care provider four times a year or more. Twenty-nine percent see their provider one to three times per year, and 9 percent do not see a provider at all.

Figure 3. Health Care Provider Visits



Diabetes care recommendations also include regular foot examinations as well as an annual dilated eye exam.⁸ Table 1 shows that approximately 70 percent of people with diabetes report having had a dilated eye exam within the last year, 20 percent had an exam over a year ago and 7 percent have never had a dilated eye exam. Table 1 also shows that 49 percent of people with diabetes had their feet examined one to three times in the last year and another 21 percent had their feet examined four or more times in the last year. Thirty percent of people with diabetes did not have their feet examined in the last year.

Table 1. Foot and Eye Care

Frequency of Receiving Care	Percent of People With Diabetes
Dilated Eye Exam	
Within the last year	72.3
More than one year ago	20.1
Never	7.6
Foot Exam	
4 or more times last year	21.3
1-3 times last year	48.7
None last year	30.0

Conclusions

Diabetes affects approximately one in 12 New Yorkers, and it is more prevalent among disadvantaged populations, including the elderly and people with lower socioeconomic status. It is estimated that half the people who have type 2 diabetes do not know they have the disease. Early diagnosis and treatment is key to reducing the incidence of complications and premature deaths resulting from them. The level of diabetes care in New York State seems to be slightly above the national average,⁹ but it is far from ideal. In particular, blood glucose self-monitor-

ing (60% not checking daily) and foot care (30% not examined last year) have not been at recommended levels. Moreover, about 28 percent of people with diabetes did not receive a dilated eye exam in the last year, and another 9 percent did not see a health care provider for their diabetes in the same period.

Diabetes does not affect individuals alone. It affects families and communities. Diabetes control requires a multidisciplinary, comprehensive effort. Communities, those who have diabetes and providers must work together to improve diabetes awareness, self-management and health care in New York State.

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